Complete Summary

GUIDELINE TITLE

Practice parameters for the treatment of sigmoid diverticulitis.

BIBLIOGRAPHIC SOURCE(S)

Practice parameters for the treatment of sigmoid diverticulitis. Standards Task Force. American Society of Colon and Rectal Surgeons. Dis Colon Rectum 2000 Mar;43(3):289. [83 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Sigmoid diverticulitis:

- Acute diverticulitis
- Uncomplicated diverticulitis
- Complicated diverticulitis (abscess, fistula, obstruction, stricture, and free perforation)
- Recurrent diverticulitis

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Colon and Rectal Surgery
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide uniform parameters for the evaluation and treatment of sigmoid diverticulitis.

TARGET POPULATION

Adults with sigmoid diverticulitis

INTERVENTIONS AND PRACTICES CONSIDERED

Initial evaluation of suspected acute diverticulitis:

- History and physical examination, including abdominal, rectal, and pelvic examinations
- Assessment of clinical features
- Differential diagnosis
- Complete blood count
- Urinalysis
- Flat and upright x-rays of the abdomen
- Other studies, if appropriate: Computed tomography (CT) scan; contrast enema; barium enema; abdominal ultrasound; flexible sigmoidoscopy
- Note: Endoscopy was considered but not recommended

Treatment options for uncomplicated acute diverticulitis:

- Conservative or medical therapy:
    - Bowel rest
    - Broad spectrum intravenous antibiotics
    - Clear liquid diet
- Outpatient treatment for selected patients
- Post-recovery re-evaluation of the colon by either flexible sigmoidoscopy and single or double-contrast barium enema or colonoscopy
- Eventual resumption of a high-fiber diet, and long-term fiber supplementation
- Computed tomography scan
- Percutaneous drainage of selected abscesses
- Primary resection and anastomosis without a protective stoma
- A two stage resection procedure, most commonly Hartmann's resection
- Primary resection with anastomosis and proximal fecal diversion
- Hartmann's reversal
- Primary anastomosis with a proximal stoma

Treatment considerations for recurrent diverticulitis after resection

Treatment options for recurrent diverticulitis:

- High-fiber diet
- Resection

Surgical options for complicated diverticulitis, depending on type, location and magnitude of the complication:

- Percutaneous or laparoscopic drainage of abscess or phlegmon
- Primary sigmoid resection with anastomosis (with or without a covering stoma)
- A two-stage resection procedure, most commonly Hartmann's resection
- Segmental resection with colostomy
- Resection of an adjacent organ in continuity with the colon
- Hartmann's resection
- Transverse colostomy

Treatment considerations for special circumstances:

- Immunocompromised patients: aggressive evaluation, with medical support and early surgical exploration
- Patients younger than 40 years: urgent or emergent surgery versus elective surgery
- Recurrent diverticulitis after resection: re-evaluation of initial diagnosis of diverticulitis; review of the initial pathology specimen; resection considerations

MAJOR OUTCOMES CONSIDERED

- Efficacy of treatment
- Rates of recurrence
- Morbidity and mortality
- Sensitivity, specificity, predictive value, and accuracy of selected screening tests

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Excerpted by the National Guideline Clearinghouse (NGC):

Initial Evaluation

Initial assessment of the patient with suspected diverticulitis is similar to that of any patient presenting with abdominal pain and includes a thorough history and physical examination, including abdominal, rectal, and pelvic examinations. The

majority of patients will have left lower quadrant pain (93-100 percent), fever (57-100 percent), and leukocytosis (69-83 percent). Other associated features may include nausea, vomiting, constipation, diarrhea, dysuria, and urinary frequency. Other entities that must be considered in the differential diagnosis include irritable bowel syndrome, colon cancer, inflammatory bowel disease, ischemic colitis, bowel obstruction, and gynecologic and urologic diseases. Useful initial examinations in evaluating the patient with abdominal pain suspected of having diverticulitis may include complete blood count, urinalysis, and flat and upright abdominal x-rays.

If the clinical picture is clear, it has been suggested that no other tests are needed and the diagnosis of diverticulitis can be made on the basis of clinical criteria alone. In cases where the diagnosis of diverticulitis is in question, other tests may be performed, such as water-soluble contrast enema, computed tomography scan, and ultrasound. The need for additional tests in the patient with suspected diverticulitis is determined by the severity of the presenting signs and symptoms and security of the diagnosis of diverticulitis.

Because of the risks of extravasation of barium from the perforation in the patient with acute diverticulitis, barium enema examination should generally be avoided in patients with suspected acute diverticulitis and localized peritoneal signs. Thus, barium enema should be performed only after local inflammation has resolved. Criteria for the diagnosis of diverticulitis at barium enema include extravasation of barium, narrowed lumen or thickened mucosa, and mass effect.

Water-soluble contrast enema has been used safely in patients with acute diverticulitis. Criteria for the diagnosis of diverticulitis on contrast enema include the presence of diverticula, mass effect, intramural mass, sinus tract, and extravasation of contrast.

Abdominal ultrasound has been suggested as a noninvasive, readily available screening tool for the diagnosis of acute diverticulitis. Criteria for the diagnosis of diverticulitis using ultrasound include wall thickening, abscess, and rigid hyperechogenicity of the colon because of inflammation. Ultrasound may also be helpful in female patients to exclude pelvic or gynecologic pathology. A potential drawback of ultrasound is that it is very "examiner dependent." There may be limited indications for use of the labeled white blood cell scan in patients with diverticulitis, but insufficient data exist at this time to draw any conclusions.

Computed tomography scan with oral, rectal, and intravenous contrast has become increasingly used as the initial imaging test for patients with suspected diverticulitis, particularly when moderate severity disease or abscess is anticipated. Criteria for diagnosis of diverticulitis include colonic wall thickening, pericolic fat infiltration ("streaky" fat), pericolic or distant abscesses, and extraluminal air. Computed tomography is not useful in differentiation of cancer from diverticulitis and must be supplemented by contrast enema or endoscopy.

Endoscopy is usually avoided in the setting of acute diverticulitis because of the risk of perforating the inflamed colon, either with the instrument itself or by insufflation of air. In situations where the diagnosis of acute colonic diverticulitis is uncertain, limited flexible sigmoidoscopy with minimum insufflation of air may be performed to exclude other diagnoses.

Medical Management

Treatment of Acute Diverticulitis

For the purpose of this discussion, "uncomplicated" diverticulitis refers to patients with acute diverticulitis without associated abscess, fistula, obstruction, or free perforation. Conservative or medical therapy for uncomplicated diverticulitis is usually bowel rest and intravenous antibiotics. Some authors suggest that a clear liquid diet is acceptable. If the patient does not improve after several days, an abscess may be suspected, and diagnostic imaging may be considered. Staging of patients by computed tomography scan may allow one to select the patients most likely to respond to conservative therapy. Conservative treatment of acute uncomplicated diverticulitis results in resolution of the problem in 70 to 100 percent of patients.

The choice of antibiotic for medical therapy should be based on the knowledge that gram-negative rods and anaerobes are the usual bacteria involved in local infection. Anaerobes are present, usually Bacteroides fragilis, in 65 to 94 percent of patients with intra-abdominal infections. Coverage with a single intravenous antibiotic with activity against aerobes and anaerobes has been shown to be as effective as combination therapy in acute diverticulitis. Selection of antibiotics is also influenced by the patient's history of allergies to antibiotics, previous response to antibiotics, recent antibiotic use by the patient, experience of the physician and the community with antibiotics for diverticulitis, and other considerations.

After recovery from an initial episode of diverticulitis, when the inflammation has settled, patients should be re-evaluated. Appropriate examinations include a combination of flexible sigmoidoscopy and single-contrast or double-contrast barium enema or colonoscopy. Eventual resumption of a high-fiber diet is recommended after acute inflammation resolves. Long-term fiber supplementation after the first episode of diverticulitis may prevent recurrence in more than 70 percent of patients followed up for more than five years.

Outpatient Treatment of Uncomplicated Diverticulitis

The decision of whether to proceed with inpatient or outpatient treatment of diverticulitis depends on the clinical judgment of the physician, severity of the disease process, and likelihood that the patient's condition will respond to outpatient therapy. Patients who are able to tolerate a diet, who do not have systemic symptoms, and who do not have significant peritoneal signs may be treated on an outpatient basis. Blood tests alone should not be used to determine how a patient should be treated, but they may be useful in determining the patient's response to therapy. In general, immunosuppressed patients, including patients receiving steroids, should not be treated on an outpatient basis.

The patient who is treated on an outpatient basis must be reliable or have a reliable family or both. The patient should understand reasons to call the physician or return to the emergency room. These circumstances may include an increase in fever or abdominal pain, or inability to tolerate oral fluids. If there is no improvement, hospitalization, change of antibiotics, or further outpatient tests

should be considered. Frequency of follow-up examinations depends on the severity of signs and symptoms and response to treatment.

Surgical Management

General Principles for Surgical Management

The following principles are recommended when performing diverticular resections:

Elective or nonurgent cases:

1. The resection must remove all thickened, diseased colon but not necessarily all of the proximal diverticula-bearing colon. It may be acceptable to retain proximal diverticular colon as long as the remaining bowel is not hypertrophied.
2. All of the sigmoid colon should be removed.
3. When anastomosis is elected it should be made to normal rectum and must be free of tension and well vascularized.

Urgent or emergent cases:

1. As a minimum, resection and diversion are generally required.
2. In selected cases where sepsis can be removed, definitive resection with anastomosis (with or without proximal stoma) may be appropriate.
3. On-table colonic lavage may be a useful adjunct to resection and anastomosis.

Resection for Diverticulitis

Primary resection and anastomosis without a protective stoma has become the treatment of choice for uncomplicated diverticulitis. Primary resection and anastomosis may also be performed for patients with localized pericolic or pelvic abscess. A single-stage procedure is associated with decreased hospital stay and has lower mortality and morbidity compared with two-stage and three-stage procedures.

A two-stage procedure with initial resection of the diseased segment and proximal fecal diversion is indicated for patients with substantial fecal contamination and inflammation. The most commonly performed two-stage operation is Hartmann's procedure. Mortality and morbidity associated with Hartmann's procedure for diverticulitis vary greatly and probably reflect different patient populations and selection criteria. Mortality ranges from 2.6 to 36.8 percent. Primary resection with anastomosis and proximal fecal diversion may also be performed and has the advantage of obviating the difficulty with identifying Hartmann's pouch at subsequent colostomy closure. Surgical treatment of diverticulitis, in both the acute and chronic settings, has been successfully accomplished by laparoscopic and laparoscopic-assisted means. Such procedures include primary resection and anastomosis, Hartmann's procedure, Hartmann's reversal, and primary anastomosis with a proximal stoma.

Resection After Recurrent Attacks of Diverticulitis

Treatment of the patient with either multiple attacks of diverticulitis or recurrent diverticulitis is individualized to minimize the morbidity and mortality of intervention. Factors that are taken into consideration when deciding to proceed with resection include: physiologic age of the patient; number, severity, and interval of the attacks of diverticulitis; rapidity and degree of response to medical therapy; and persistence of symptoms after an acute attack of diverticulitis. The risk of recurrent symptoms after an attack of diverticulitis ranges from 7 to 45 percent Institution of a high-fiber diet may reduce the risk of recurrent diverticulitis. With each recurrent episode the patient is less likely to respond to medical therapy (70 percent chance of response to medical therapy after the first attack vs. 6 percent chance after the third). Thus, after two attacks of uncomplicated diverticulitis, resection is commonly recommended. Resection may be recommended for patients with complicated diverticulitis after a single attack.

Treatment of Complicated Diverticulitis

Complications associated with acute diverticulitis include abscess, fistula, obstruction, stricture, and free perforation. Lower gastrointestinal bleeding is much more commonly associated with diverticulosis than diverticulitis. Diverticulitis Associated with Abscess or Phlegmon. The inflammatory condition associated with perforation of a colonic diverticulum is known as diverticulitis. This perforation can lead to a limited, localized inflammatory process (phlegmon), formation of a pericolic or intra-abdominal abscess, or peritonitis (purulent in addition to fecal). A grading system for the degree of perforation has been devised by Hinchey et al. Stage I involves diverticulitis associated with pericolic abscess; Stage II, diverticulitis associated with distant abscess (retroperitoneal or pelvic); Stage III, diverticulitis associated with purulent peritonitis; Stage IV, diverticulitis associated with fecal peritonitis.

Treatment of patients with a diverticular abscess depends on the magnitude and location of the abscess in addition to the patient's clinical condition at the time of diagnosis. Small pericolic abscesses may resolve with antibiotic therapy and bowel rest; therefore, the patient may not require urgent or emergent surgical intervention. For a patient with a large diverticular abscess, two options are available, percutaneous or surgical drainage. The potential advantage of percutaneous drainage is that it may allow stabilization of the patient and avoidance of a temporary stoma and a second operation. Drainage of radiologically accessible unilocular collections may allow temporary defervescence before resection with primary anastomosis. Thus, the patient can theoretically avoid a two-stage operative procedure. Seventy to 90 percent of patients with diverticular abscess who are amenable to computed tomographically-guided percutaneous drainage may be successfully drained. Recently, some surgeons have suggested that surgical resection may not be mandatory in every case after successful percutaneous drainage; however, at present there are insufficient data to support universal endorsement of this concept.

Patients with abscesses that are not amenable to computed tomographically-guided percutaneous drainage or in whom clinical symptoms persist after percutaneous drainage should undergo laparotomy. Except in extraordinary circumstances, initial resection of the diseased segment (rather than drainage and

fecal diversion) should be performed. If adequate bowel preparation is possible and substantial contamination is not present, a primary anastomosis may be performed, with or without a proximal stoma. Alternatively, Hartmann's resection is the most appropriate procedure. Some recent data suggest that laparoscopic abscess drainage may be a useful temporizing measure if computed tomography scan and ultrasound are unavailable. Other authors have noted that laparoscopic drainage can also be a definitive procedure without subsequent resection. These concepts are new and require further study.

Diverticulitis Associated with Free Perforation. Free perforation of acute diverticulitis with fecal or purulent peritonitis is a surgical emergency that requires immediate resuscitation with intravenous fluids, broad spectrum antibiotics, cardiovascular support (when indicated), and prompt operative therapy. Although free perforation is an uncommon complication of acute diverticulitis, depending on the degree of fecal contamination, magnitude of sepsis, and timeliness of operative intervention, a 6 to 35 percent mortality rate is expected with this complication. The procedure of choice in this situation is immediate segmental resection with colostomy. Advantages of removing the offending perforated segment have been well documented. Drainage alone, with or without suture of the offending colonic segment, resulted in a mortality rate of 28 percent, whereas resection with creation of a colostomy yielded a mortality rate of 12 percent.

Diverticulitis Associated with Fistulas. Colovesical fistulas are the most common spontaneously occurring fistulas and comprise approximately 65 percent of diverticular fistulas. Other fistulas include colovaginal, colocutaneous, coloenteric, and colouterine. Although diverticular disease is the most common cause of these fistulas, other causative factors, such as colon cancer, inflammatory bowel disease, and radiation-induced fistulas, should be excluded. If there is any question that the fistula may be related to colonic malignancy, a portion of the adjacent organ must be resected in continuity with the colon.

The guiding principle in treatment of diverticular fistulas is resection of the diseased segment of colon, with repair of the contiguous organ. In the majority of cases, a primary resection and anastomosis can be performed.

Diverticulitis Associated with Obstruction. Patients with large-bowel obstruction presumably caused by diverticular stricture should, under most circumstances, undergo expeditious surgery after a short course of resuscitation, including hydration and nasogastric decompression. The timing and need for surgery depend on the clinical course. If the obstruction resolves, it is acceptable to allow the bowel to decompress sufficiently so that a mechanical and antibiotic preparation can be given and a one-stage procedure performed. The possibility that the obstruction is caused by carcinoma rather than diverticular disease must be considered. The main surgical approach to patients with large-bowel obstruction caused by diverticular stricture is Hartmann's resection. In selected patients, on-table lavage and primary anastomosis may be performed. If the patient is very unstable, it may be acceptable to perform a transverse colostomy and defer resection to a later date.

Special Circumstances

Immunocompromised patients

Diverticulitis in immunocompromised patients may manifest with few of the classical signs and symptoms of the disease, and thus, diagnosis and effective treatment may be unduly delayed. Immunocompromised patients include transplant patients, patients with renal failure, and patients with acquired immunodeficiency syndrome. Medical treatment of diverticulitis is much less successful in immunocompromised patients compared with nonimmunocompromised patients. Immunocompromised patients are more likely to present with free perforation than are nonimmunocompromised patients.

Because postoperative mortality is high in immunocompromised patients, an index of suspicion is necessary in treating immunocompromised patients. An approach incorporating an aggressive evaluation with medical support and early surgical exploration is generally warranted.

Diverticulitis in Young Patients

Diverticular disease is relatively uncommon in patients younger than 40 years of age and constitutes only 2 to 5 percent of the total number of patients in multiple large studies. The diagnosis of diverticulitis is often not considered in young patients; the most common presumed diagnosis is acute appendicitis. A much higher percentage of young patients require urgent or emergent surgery on presentation. Whereas less than one-third of patients with diverticular disease require surgery at presentation, it has been suggested that up to two-thirds of young patients require operative intervention at presentation. Although some surgeons recommend elective resection in the young patient after one well-documented episode of uncomplicated diverticulitis, this tenet remains controversial, because the natural history of diverticular disease in the young patient has not been clearly defined. Two recent studies failed to substantiate a "more aggressive" nature of diverticulitis in young patients.

Recurrent Diverticulitis After Resection

After resection for diverticulitis, it is estimated that 4 to 7 percent of patients may have recurrent diverticulitis. In treating the patient with "recurrent" diverticulitis, the question must be raised as to whether the patient had diverticulitis in the first place. Review of the initial pathology specimen may be helpful, although lack of inflammation in the specimen does not exclude the diagnosis of diverticulitis. Patients with irritable bowel syndrome and inflammatory bowel disease may occasionally undergo sigmoid resection for pathology presumed to be diverticulitis.

Related issues at the time of resection are (1) what should constitute the degree of proximal resection and (2) where should the distal anastomosis be performed. It is not necessary to remove all proximal diverticula-bearing colonic tissue. In terms of the proximal resection margin, normal, noninflamed healthy-appearing bowel of normal caliber can safely be retained, even in the presence of diverticulosis. However, an effort should be made not to incorporate diverticula into the anastomosis. The incidence of recurrent diverticulitis after resection is much higher when the sigmoid colon is used for distal anastomosis compared with the rectum.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- The guideline outlines a general approach to the management of patients with sigmoid diverticulitis. Such an approach may lead to more appropriate and effective treatment of sigmoid diverticulitis.
- Conservative treatment of acute uncomplicated diverticulitis results in resolution of the problem in the majority of patients (70%-100%).
- Long-term fiber supplementation after the first episode of diverticulitis may prevent recurrence in more than 70% of patients followed for more than five years.
- For primary resection of uncomplicated diverticulitis, a single-stage procedure is associated with decreased hospital stay and has lower mortality and morbidity compared with two-stage and three-stage procedures.

Surgical Management

- For primary resection with anastomosis and proximal fecal diversion may also be performed and has the advantage of obviating the difficulty with identifying Hartmann's pouch at subsequent colostomy closure.
- For a patient with a large diverticular abscess, two options are available, percutaneous or surgical drainage. The potential advantage of percutaneous drainage is that it may allow stabilization of the patient and avoidance of a temporary stoma and a second operation. Drainage of radiologically accessible unilocular collections may allow temporary defervescence before resection with primary anastomosis. Thus, the patient can theoretically avoid a two-stage operative procedure. Seventy to 90 percent of patients with diverticular abscess who are amenable to computed tomography-guided percutaneous drainage may be successfully drained.
- Diverticulitis associated with free perforation is a surgical emergency requiring immediate segmental resection with colostomy. In a series of patients with diverticulitis associated with free perforation, resection with colostomy creation yielded a mortality rate of 12%, compared to a mortality rate of 28% for a series of patients with drainage alone, with or without suture of the offending colonic segment.

POTENTIAL HARMS

- Because diverticulitis is largely an extramural disease, there is some suggestion that contrast enema may underestimate the severity of the disease.
- A potential drawback of ultrasound is that it is very "examiner dependent."
- Mortality associated with Hartmann's procedure, the most commonly performed two stage procedure, ranges from 2.6 to 36.8 percent. This wide range probably reflects different patient populations and selection criteria.

Subgroups Most Likely to be Harmed:

Postoperative mortality is reported to be as high as 40% in immunocompromised patients.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

1. It should be recognized that these guidelines should not be deemed inclusive of all proper methods of care or exclusive of methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific procedure must be made by the physician in light of all of the circumstances presented by the individual patient.
2. This practice parameter has been developed from sources believed to be reliable. The American Society of Colon and Rectal Surgeons makes no warranty, guaranty or representation whatsoever as to the absolute validity or sufficiency of any parameter, and the Society assumes no responsibility for the use or misuse of the material.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Practice parameters for the treatment of sigmoid diverticulitis. Standards Task Force. American Society of Colon and Rectal Surgeons. Dis Colon Rectum 2000 Mar;43(3):289. [83 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000

GUIDELINE DEVELOPER(S)

American Society of Colon and Rectal Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society of Colon and Rectal Surgeons

GUIDELINE COMMITTEE

Standards Task Force, American Society of Colon and Rectal Surgeons

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Task Force Members: Drs. W. Douglas Wong and Steven D. Wexner, Project Directors; Ann Lowry, Chairman; Anthony Vernava III, Vice Chairman, Marcus Burnstein, Frederick Denstman, Victor Fazio, Bruce Kerner, Richard Moore, Gregory Oliver, Walter Peters, Theodore Ross, Peter Senatore, Clifford Simmang

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline. It updates a previously issued guideline (Roberts P, Abel M, Rosen L, et al. Practice parameters for sigmoid diverticulitis--supporting documentation. Dis Colon Rectum 1995;38:126-32).

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Society of Colon and Rectal Surgeons (ASCRS) Web site.

Print copies: Available from ASCRS, 85 W. Algonquin Road, Suite 550, Arlington Heights, Illinois 60005.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Wong WD, Wexner SD, Lowry A, Vernava A, Burnstein M, Denstman F, Fazio V, Kerner B, Moore R, Oliver G, Peters W, Ross T, Senatore P, Simmang C. Practice parameters for the treatment of sigmoid diverticulitis--supporting documentation. The Standards Task Force. The American Society of Colon and Rectal Surgeons. Dis Colon Rectum. 2000 Mar;43(3):290-7.

Electronic copies: Available from the American Society of Colon and Rectal Surgeons (ASCRS) Web site.

Print copies: Available from ASCRS, 85 W. Algonquin Road, Suite 550, Arlington Heights, Illinois 60005.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 12, 2001. The information was verified by the guideline developer as May 4, 2001.

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